

PRESENTATION 500ml and 1,000ml bags of Compound Sodium Lactate Intravenous Infusion (also called Hartmann's Solution for Injection or Ringer-Lactate Solution for Injection).	INDICATIONS Blood and fluid loss, to correct hypovolaemia and improve tissue perfusion. Dehydration.
ACTIONS Fluid volume replacement.	CONTRA-INDICATIONS Should NOT be used as fluid replacement in diabetic hyperglycaemic ketoacidotic coma and pre-coma; use sodium chloride intravenous infusion 0.9% instead.
SIDE EFFECTS Infusion of an excessive volume may overload the circulation and precipitate heart failure (increased breathlessness, wheezing and distended neck veins). Volume overload is unlikely if the patient is correctly assessed initially and it is very unlikely indeed if patient response is assessed after initial 250ml infusion and then after each 250ml of infusion. If there is evidence of this complication, the patient should be transported rapidly to nearest suitable receiving hospital whilst administering high-flow oxygen. Do not give further fluid.	CAUTIONS Compound sodium lactate intravenous infusion should not be given except to keep vein open in ISOLATED head injuries because large-volume infusions may increase intra-cranial pressure. HOWEVER, in head injured patients with other significant trauma, infuse as normal to correct volume loss. Inadequate infusion decreases cerebral blood flow and increases hypoxia.
ADDITIONAL INFORMATION Compound sodium lactate intravenous infusion contains mainly sodium, but also small amounts of potassium and lactate. It is useful for initial fluid replacement in cases of blood loss. Sodium lactate diffuses rapidly into extra-cellular space (around 75%), so it is useful for initial resuscitation of major fluid loss, followed by blood or colloid. It is also useful as sole volume replacement in small volume losses. The volume of compound sodium lactate intravenous infusion needed is 3 times as great as the volume of blood loss. Sodium lactate has NO oxygen carrying capacity.	

DOSAGE AND ADMINISTRATION

In hypovolaemia, Medical Emergencies (e.g. anaphylaxis, GI bleeding, heat exhaustion)

Route: IV rapid infusion

AGE	DOSE	VOLUME
Adult	250ml	250ml

ADULTS – Monitor physiological response; re-assess perfusion, pulse, respiratory rate and blood pressure wherever possible. If these observations improve, slow the infusion rate. If no improvement administer further 250ml boluses/ aliquots to maintain a radial pulse (maximum 2 litres).

AGE	Medical Emergencies 20ml/kg		Medical Emergencies initial volume 5ml/kg	
	DOSE	VOLUME	DOSE	VOLUME
11 years	700ml	700ml	180ml	180ml
10 years	640ml	640ml	160ml	160ml
9 years	570ml	570ml	140ml	140ml
8 years	520ml	520ml	130ml	130ml
7 years	460ml	460ml	120ml	120ml
6 years	410ml	410ml	100ml	200ml
5 years	370ml	370ml	90ml	90ml
4 years	330ml	330ml	80ml	80ml
3 years	290ml	290ml	70ml	70ml
2 years	240ml	240ml	60ml	60ml
18 months	220ml	220ml	60ml	60ml
12 months	200ml	200ml	50ml	50ml
9 months	180ml	180ml	50ml	50ml
6 months	160ml	160ml	40ml	40ml
3 months	120ml	120ml	30ml	30ml
1 month	90ml	90ml	20ml	20ml
Birth	70ml	70ml	20ml	20ml

CHILDREN – If necessary a further dose of up to 20ml/kg may be administered as above. If further fluid is required seek on-line medical help.

Excessive rise of blood pressure may cause re-bleeding and further haemorrhage. Aim to maintain a systolic blood pressure of 90 mmHg, measured accurately where possible or estimated by the presence of a radial pulse where time is critical.

If the patient remains hypotensive despite repeated 250ml boluses AND the patient is trapped on scene, request on-line clinical support.